

State of Washington
REPORT OF EXAMINATION FOR CHANGE

Change Purpose of Use

WRTS File # CG3-25690C@1

PRIORITY DATE	APPLICATION NO.	PERMIT NO.	CERTIFICATE NO.
October 18, 1977	G3-25690	G3-29690	G3-25690

NAME OF PARTY CONVEYING RIGHT TO TRUST WATER RIGHTS PROGRAM		
State of Washington, Department of Ecology (Spokane Valley -Rathdrum Prairie Aquifer Bank)		
ADDRESS/STREET	CITY/STATE	ZIP CODE
4601 N Monroe Street	Spokane, WA	99205-1295

TRUST WATER RIGHT ATTRIBUTES

SOURCE
Ground Water (Spokane Valley - Rathdrum Prairie Aquifer)
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	1625	122.5

QUANTITY, TYPE OF USE, PERIOD OF USE
1625 gallons per minute, 122.5 acre-feet per year, from January 1 through December 31, each year, for mitigation bank, for exempt wells within the Spokane Valley - Rathdrum Prairie Aquifer

HISTORIC POINT OF WITHDRAWAL

APPROXIMATE LOCATION OF HISTORIC WITHDRAWAL					
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE [E. or W.] W.M.	WRIA	COUNTY
SE¼SE¼	13	25 N.	43 E.	57	Spokane
PARCEL NUMBER	LATITUDE	LONGITUDE		DATUM	
35134.9096	47.6596	-117.3047		NAD83/WGS84	

AFFECTED REACHES -- DESCRIPTION OF PLACE OF USE
[See Attachment 1 for map of the trust water right location.]

The functional place of use for this Trust Water Right will be the Spokane Valley - Rathdrum Prairie Aquifer, within the State of Washington. The reference defining the boundary of the Spokane Valley Rathdrum Prairie Aquifer is: Kahle, S.C., and Bartolino, J.R., 2007, Hydrogeologic framework and ground-water budget of the Spokane Valley-Rathdrum Prairie aquifer, Spokane County, Washington, and Bonner and Kootenai Counties, Idaho: U.S. Geological Survey Scientific Investigations Report 2007-5041

The stream reaches which would potentially be affected by this Trust Water Right begins below Upriver Dam on the Spokane River within the NE¼ of Section 11, T. 25 N., R. 43 E. (approximately River Mile 80) and extending downstream along the Spokane River to a point where it empties into Nine Mile Reservoir within Section 28, T. 26 N. R. 42 E.W.M. (approximately River Mile 64)

TRUST WATER RIGHT TERM

BEGIN DATE	END DATE
n/a	Permanent

Provisions related to the Trust Water Right:

Consistent with 90.42.080(1)(a), this trust water right shall be managed by Ecology for the purpose of mitigation of new permit exempt well withdrawing water from the Spokane Valley -Rathdrum Prairie aquifer, within the State of Washington, as described in this trust water report.

This trust water will be managed by the State of Washington, Department of Ecology, Water Resources Program. Mitigation credits shall be issued as a “Certificate of Mitigation” which has been determined to be one acre-foot of water per calendar year. Each mitigation credit shall be limited to 5000 gallons per day for domestic supply; 5000 gallons per day for stockwater; 5000 gallons per day for industrial purposes; and the irrigation of one-half acre of non-commercial irrigation of a lawn or garden. Each Certificate of Mitigation shall be recorded with Spokane County.

Mitigation water cannot be consolidated into existing municipal water rights, since it is held in trust by the State of Washington for SVRP Aquifer Bank.

Provisions related to Permit Exempt Wells, provided under the SVRP Mitigation Bank

Each mitigation credit shall be limited to 5000 gallons per day for domestic supply; 5000 gallons per day for stockwater; 5000 gallons per day for industrial purposes; and the irrigation of one-half acre of non-commercial irrigation of a lawn or garden.

All wells constructed in the state must meet the construction requirements of WAC 173-160 titled “Minimum Standards for the Construction and Maintenance of Wells” and RCW 18.104 titled “Water Well Construction”. Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Mitigation water shall only be available for permit exempt wells completed into the Spokane Valley -Rathdrum Prairie aquifer, within the State of Washington.

If at any time the exempt well is abandoned or water is provided from another source, the mitigation water shall revert back to the SVRP Aquifer Bank. The land holder shall notify Ecology when mitigation is no longer required. This water shall then be available for reallocation.

FINDINGS OF FACT AND ORDER

Upon reviewing the investigator’s report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER the requested change of place and purpose of use under Trust Water Right Application No. G3-25690, be approved subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel Road SW Ste 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Spokane, Washington, this day of 2015.

Keith L. Stoffel, Section Manager

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

INVESTIGATOR'S REPORT
Dan Tolleson, Department of Ecology
Water Right G3-25690
Spokane Valley -Rathdrum Prairie (SVRP) Aquifer Bank

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number CG3-25690C (Ground Water Certificate No. G3-25690C). This application for change proposes to place an existing water right into the trust water program for mitigation of permit exempt well uses within the Spokane Valley - Rathdrum Prairie Aquifer. This mitigation will be administered through a bank known as the SVRP Aquifer Bank.

Table 1 Summary of Existing Attributes and Proposed Changes to Water Right No. G3-25690C

Attributes	Documented	Proposed
Name	Acme Concrete Co	State of Washington (Department of Ecology)
Priority Date Date of Application for Change	10/18/1977	12/30/2015
Instantaneous Quantity	1625 gpm	Transfer all to the SVRP Aquifer Bank
Annual Quantity	429.5 acre-feet	Consumptive use proposed to be transferred to the SVRP Aquifer Bank
Source	Spokane Valley - Rathdrum Prairie Aquifer	Spokane Valley - Rathdrum Prairie Aquifer
Point of Diversion/Withdrawal	Two Wells	n/a
Purpose of Use	Industrial	Mitigation bank for permit exempt wells
Period of Use	1/1 – 12/31	1/1 – 12/31
Place of Use	Within portions of the SE¼ of Section 13, T. 25 N., R 43 E.W.M., (see file for complete legal description)	The functional place of use for this Trust Water Right will be the Spokane Valley - Rathdrum Prairie Aquifer (Within WRIAs 54, 55, 56, 57)

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum in NAD83/WGS84; GPD = gallons per day; 325,851 gallons = 1 acre-foot

Legal Requirements for Requested Change

The following is a list of requirements that must be met prior to authorizing the proposed change.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Spokesman-Review on February 6 and 13, 2015. No protests were received regarding this notice.

Water Banking Notice

RCW 90.42.100(4) The department shall provide electronic notice and opportunity for comment to affected local governments and affected federally recognized tribal governments prior to initiating use of the trust water rights program for water banking purposes for the first time in each water resource inventory area. This notification and comment process was included during the development of Chapter 173-557 WAC, Spokane River and Spokane Valley Rathdrum Prairie Aquifer and amendment to Chapter 173-555 WAC, Little Spokane River. Comments were addressed during the rule making process.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- (b) It is a groundwater right application for more than 2,250 gallons per minute;
- (c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- (d) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- (e) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

Water Resources Statutes and Case Law

This application qualifies for expedited processing under WAC 173-152-050(3)(a) whereby water right change applications may be processed prior to applications submitted at an earlier date when the proposed water use, if approved, would substantially enhance or protect the quality of the natural environment.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp*.

RCW 90.44.050 The Groundwater Permit Exemption, states that several typically small ground water uses are exempt from the permitting process. These uses include the following:

- Providing water for a single or group of homes (limited to 5,000 gallons per day)
- Providing water for industrial purposes (limited to 5,000 gallons per day)
- Providing water for livestock (no gallon per day limit)
- Watering a non-commercial lawn or garden not to exceed one-half acres (no gallon per day limit)

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

RCW 90.42.080(1)(a) The state may acquire all or portions of existing surface water or groundwater rights, by purchase, gift, or other appropriate means other than by condemnation, from any person or entity or combination of persons or entities. Once acquired, such rights are trust water rights.

RCW 90.42 allows Ecology to acquire water rights and put them into a Water Bank for the purpose of mitigating future use within a given basin. Water Banking requirements specifically are as follows:

- RCW 90.42.100 Water Banking (general requirements)
- RCW 90.42.110 Water Banking -- Application to transfer water rights
- RCW 90.42.120 Water Banking – Requirements – Appeals
- RCW 90.42.130 Water Banking – Input for affected entities – Reports

When changing or adding points of withdrawal to groundwater rights (RCW 90.44.100), or when consolidating exempt wells with an existing permit or certificate (RCW 90.44.105), the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- (a) Hydraulic connectivity.
- (b) Common recharge (catchment) area.
- (c) Common flow regime.
- (d) Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow.

INVESTIGATION

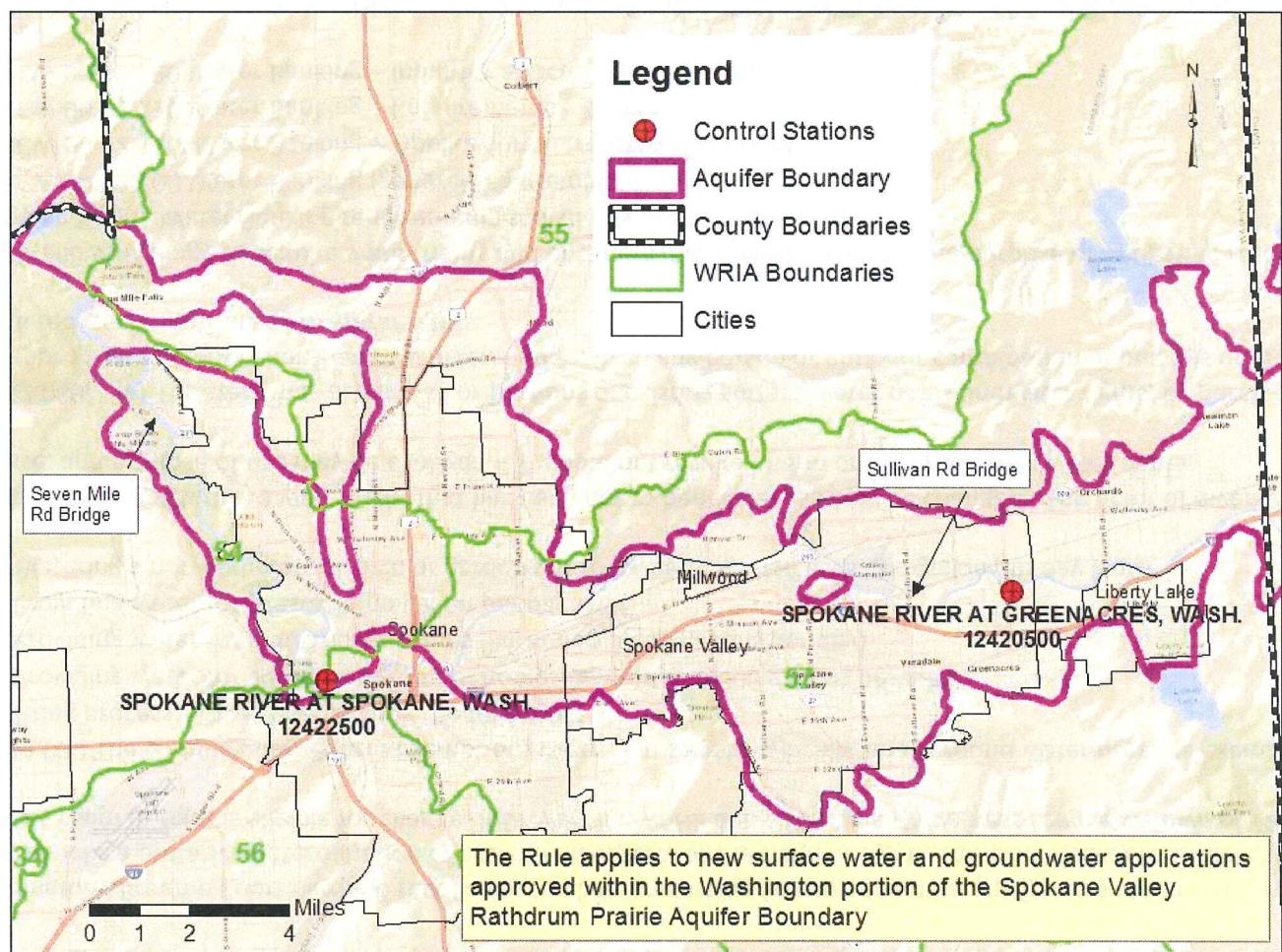
In considering the proposed application, the investigation included, but was not limited to, research and review of: (1) appropriate rules and statutes; (2) other water rights, permits, and claims; (3) USGS topographic maps and aerial photographs; (4) wells, water delivery system and place of use; (5) Watershed Planning for the Spokane Valley - Rathdrum Prairie Aquifer; (6) Guidance for Processing and Managing Trust Water Rights (GUID 1220); (7) evaluation of the water right submitted by WNR Group dated November 4, 2012; and (8) discussions with Department of Ecology regional program staff.

Ecology has the responsibility to manage water use, which is commonly accomplished by establishing instream flow rules. On February 27, 2015, the “Spokane River and Spokane Valley Rathdrum Prairie Aquifer Chapter 173-557 WAC” and amendment to the “Little Spokane River Basin Water Resources Management Program WAC 173-555-010” rules were

adopted. These rules apply to the main stem of the Spokane River and those portions of Spokane and Stevens Counties within the boundary of the Spokane Valley Rathdrum Prairie Aquifer. The purpose of the above listed instream flow rules is to protect and manage instream resources which includes fish, wildlife, recreational uses, wastewater management, hydropower, and water rights. The rule protects river flows by setting a regulatory threshold or “low flow”, which is used to help determine water available for new appropriation. This essentially means that any new water right issued within the boundary of the aquifer will be interruptible when the flow in the River drops below the instream flow. Since new permit exempt wells will not have a reliable (uninterruptible) source during regulatory periods related to the instream flow, a mitigation bank was established under WAC 173-557-060(3). This application was submitted to establish a mitigation bank, which will be called the SVRP Aquifer Bank.

The Spokane River Basin provides habitat to a number of fish species both native and introduced. Surface water flows within the basin are not always sufficient for the habitat of some species. Significant amounts of time, effort and money have been invested within this basin by local, state, federal and tribal interests to preserve habitat conditions for these species. Instream flow has been identified as a primary limiting factor for habitat. Maintaining instream flow conditions in the Spokane River is important and is necessary to prevent further degradation of habitat. This application would serve to mitigate the effect of new permit exempt withdrawals on basin surface waters during low-flow periods, thereby preventing degradation of surface water flows.

Map of SVRP Aquifer



A field investigation of Ground Water Certificate No. G3-25690C was conducted by Dan Tolleson, with Gene St. Godard on December 23, 2014. The project is located in the area know as East Spokane, which is within the boundary of the Spokane Valley - Rathdrum Prairie Aquifer as defined by rule.

The authorized place of use of this right is located within portions of the SE¼ of Section 13, T. 25 N., R. 43 E.W.M. The vast majority of the project consists of an open pit gravel mine. This mine was dug and dredged down to approximately 100 feet below the average aquifer water level. As a result the mine now has a 61 acre pond supplied by ground water, with extremely steep shorelines. Approximately one-quarter of this gravel pit is located outside of the authorized the place of use. A small portion of the authorized place of use was not historically mined, since it contained the batch plant and access road.

This certificate authorized two wells located within the SE¼SE¼ of Section 13, T. 25 N., R. 43 E.W.M. Well No. 1 was removed in 2009 during the expansion of the gravel pit. This well was known as the “gravel washing well” that reportedly had a 125 horsepower pump, with no meter. Well No. 2, known as the “batch plant well” remained as the primary source for this right until the mine was shut down in 2011. The batch plant well reportedly had a 7.5 horsepower pump with no meter. The entire infrastructure for this well has been removed and it currently has a welded cap. These wells were operated as an integrated system, that was also connected to a third well, known as the “wash rack well” authorized under Ground Water Certificate No. G3-25698C. This system of wells was historically used to supply water to the gravel mine and its operations, under Ground Water Certificate Nos. G3-25690C and G3-25698C. In addition, this system of wells had an intertie with Spokane County Water District No. 3, which was utilized after the “gravel washing well” was removed. The water system for the mine is currently offline and is partially dismantled.

History of Water use

Ground Water Certificate No. G3-25690C was issued in 1985, with a priority date of October 18, 1977. Aerial photographs were used to help verify the extent of development, historical and beneficial use. Photographs from the 1980s to 2011 show that the pit was expanded, which demonstrates rock was removed from the mine. This indicates the water right was continuously utilized, to provide water for the gravel pit operations through 2011. This is consistent with the electrical use data and associated use calculations. In 2012, operations ceased and Central Premix Cooperation (CPM) put this water right into the trust water program as a temporary donation. The lot containing the batch plant was sold after mine operations ceased, but the water right was withheld from the sale. On January 16, 2015, CPM sold Ground Water Certificate No. G3-25690C to the State of Washington, Department of Ecology. The temporary donation was then updated to reflect the sale on January 20, 2015. The trust donation expires November 30, 2017 or when this report is issued, whichever comes first.

The authorized annual quantity for this right is 429.6 acre-feet per year. Power records for the project were provided from 2007-2011 and were used to help determine the quantity of water that was actually withdrawn under this water right. The power meter data included not only the well pump use but the other electrical uses associated with the mine, which include the batch plant, office and support buildings and gravel processing equipment. It has been estimated that 40% of the electrical power was used to run the well pumps, with the remaining utilized for other uses within the mine. Water use was determined with the following formula defined in WAC 173-173-160: $Volume = (318600) (kWh) (Peff) (Meff) / Total\ dynamic\ head$. The system was estimated to have a pump efficacy of 75%, a motor efficiency of 75% and a Total Dynamic Head of 250 feet. According to the power meter data, the maximum annual quantity used was 457 acre-feet, which occurred in 2007. Since the power meter data has other uses it is just an estimate. A second calculation was used to confirm this use which is as follows: 200 days per year x 8 hours per day (480 min) x 1625 gallons per minute = 478 acre-feet per year. Both of the calculations resulted in similar use estimates, indicating that at least 429.6 acre-feet were withdrawn in 2007. Therefore, it appears that the maximum authorized annual quantities of the right have been put to full beneficial use.

Water Use Table

Year	*kWh	Constant	Peff	Meff	TDH	Gallons	Af/year
2011	11,024	318600	0.75	0.75	250	7,902,554	24
2010	23,888	318600	0.75	0.75	250	17,124,112	52
2009	62,384	318600	0.75	0.75	250	44,719,970	137
2008	173,056	318600	0.75	0.75	250	124,055,193	380
2007	207,888	318600	0.75	0.75	250	149,024,512	457

*This number is derived form 40% of the total recorded use on the electrical meter

The authorized instantaneous quality for this right is 1625 gallons per minute from two wells. Reportedly, Well 1 produced 1500 gpm and Well 2 produced 125 gallons per minute, meaning the maximum authorized instantaneous quantities were put to beneficial use. According to CPM, Well No. 1 was removed in 2009 and the majority of water was replaced by Spokane County Water District No. 3, a local water purveyor.

Since this trust application is intended to provide water for a mitigation bank, only the consumptive portion of the right is available for change. Consumptive use under this project varies significantly between the various types of uses associated with industrial supply of the gravel mine. The primary uses under this right included the batch plant, office/support buildings domestic use, landscaping, gravel processing, dust control and general mine uses. These industry supply uses are defined and summarized below.

Consumptive Water Use Table

Industrial Use	AF Total Use	AF Consumptive Use
Concrete Batching (cement production)	33.2	33.2
Cement Truck Water (side tank water)	6.6	6.6
Indoor Use Water (domestic supply)	1.8	1.8
Landscaping Water (irrigation)	9.5	8.0
Dust Control (gravel stockpiles)	12.7	10.8
Dust Control (haul roads)	28.4	28.4
Miscellaneous water use (all other uses)	337.4	33.7
Total	429.6 af	122.5 af

AF = acre-foot; 325,851 gallons = 1 acre-foot; gpd = gallons per day

- Concrete Batching (cement production): Water was used within the batch plant to manufacture cement, which was all transported off site. According to the Uniform Building Code, a typical ratio of one part of water to two parts cement mix (including sand, rock and Portland cement) is used. A cubic yard of cement is approximately 1/3 water which equates to 67 gallons per yard (27 cubic feet x 7.48 gallons per cubic foot x 0.33% = 67 gallons per yard). CPM has estimated that 21,506 trucks with an average of 7.5 yards of cement were sent offsite in 2007, the highest production year. This means that the facility produced about 161,289 cubic yards of cement for a total water consumption of 33.2 acre-feet (161289 x 67 / 325851 = 33.17 af). Since this water was all taken offsite it was considered completely consumptive.

- **Cement Truck Water (side tank water):** Each cement truck has a “side tank” that holds approximately 100 gallons of water, that is used off site. The side tank is used to add water to the cement mix if needed and to wash the cement truck immediately after each delivery. CPM estimated that 21,506 trucks were sent out during 2007, which totals 6.6 acre-feet of water ($21506 \times 100 / 325851 = 6.599$ af). Since this water was all taken offsite it was considered completely consumptive.
- **Indoor Use Water (domestic supply):** The office and support buildings used water for domestic supply purposes directly related to the industrial facility. This use was completely consumptive since it was either directly consumed or returned as waste water to the municipal sewer system. The municipal sewer system returns water to the Spokane River and not the SVRP Aquifer. The facility had an estimated average of 44 employees on site during 2007. They are estimated to have worked 260 days that year and to have used 50 gallons per day. At that rate the consumptive use was 1.8 acre-feet ($50 \text{ gpd} \times 44 \text{ employees} \times 260 \text{ days} / 325851 = 1.76$ acre-feet).
- **Landscaping Water (irrigation):** This water was historically used for the irrigation of three acres of lawn and shrubs. The State of Washington Irrigation Guide (WA210-VI-WAIG) states that 2.35 acre-feet, per acre, for pasture/turf is required in the Spokane area. At a 75% efficiency rate of application, the maximum water duty is 3.15 acre-feet per year, per acre. This results in an allocation of 9.45-acre-feet per year for the irrigation of 3 acres. Some of this water does return to the aquifer and is considered “return flows”, which are not available for change. An estimate of the consumptive water was derived from Guidance GUID-1210. According to this Guidance, an irrigation system of solid set sprinklers has an average evaporation rate of 10% and an average return flow of a 15%. Given this calculation, 1.45-acre-feet of this right will be considered return flows (85% of 9.45 = 8 af). Therefore, a total of eight acre-feet will be considered consumptively used and is representative of the use in 2007.
- **Dust Control (gravel stockpiles):** A system of sprinklers was utilized for dust control of gravel products. This system used six sprinklers for the gravel stockpiles and two sprinklers for the gravel conveyance systems. Each sprinkler consisted of a rainbird type that uses seven gallons per minute. These sprinklers were typically operated fourteen hours a day, from June 1 through October 1, with some use in May and October. This use equates to an average of 88 days per year (22 days per month x 4 months) in which they were operated on a timer. This means 12.7 acre-feet were typically used for dust control of gravel products ($8 \text{ sprinklers} \times 7 \text{ gpm} \times 14 \text{ hours per day} \times 88 \text{ days} / 325851 = 12.7$ acre-feet). It is estimated that this system has a return flow similar to solid set sprinklers described in Guidance GUID-1210. According to this Guidance, an irrigation system of solid set sprinklers has an average return flow of a 15%, with the rest being consumptive. Although this guidance is for agricultural crops, the use associated with gravel watering appears to be similar since gravel is kept wet and is hauled off site. In addition, rock and crushed gravel have a much higher evaporation rate than regular soil. Given these factors, a total of 10.8 acre-feet will be considered consumptively used (85% of 12.7 af = 10.8 af) and is representative of the use in 2007.
- **Dust Control (haul roads):** Water trucks were used for dust control on the “haul roads” and open areas within the mine. These water trucks held 3500 gallons each and on average 15 truckloads were applied per day by on-truck sprayers. This water was used approximately eight months per year, on week days, which equates to 176 days per year (22 days month x 8 months = 176). Given this estimate, a total of 28.36 acre-feet were put to use ($3500 \text{ gallons} \times 15 \text{ truck/day} \times 176 \text{ days} / 325851 = 28.36$ acre-feet). The roads and open areas consist of rock, gravel, dust and some soils that are constantly turned up by heavy equipment traffic. Water is typically only applied as needed, which mean it mostly stays in the surface layers. In this type of environment, essentially all of the water applied is consumptively used. Therefore, it is estimated that 28.4 acre-feet were consumptively used in 2007.
- **Miscellaneous water uses (all other uses):** This calculation will cover all other associated uses of this mine that are not delineated above. These uses include steam tunnel water which was used for winter time rock removal on conveyer belts, truck cleaning, equipment cleaning, general steam cleaning, gravel crushing, gravel washing and other associated mining uses. These uses are estimated to have a general evaporation rate of 10%, which is typical for this type of mining operation. There is 92.2 acre-feet of water accounted for in the above listed uses. The remainder of the right that has been put to beneficial use, in 2007, is 337.4 acre-feet of water. Given this calculation (10% of 337.4 = 33.7 af), 33.7 acre-feet will be considered consumptively used.

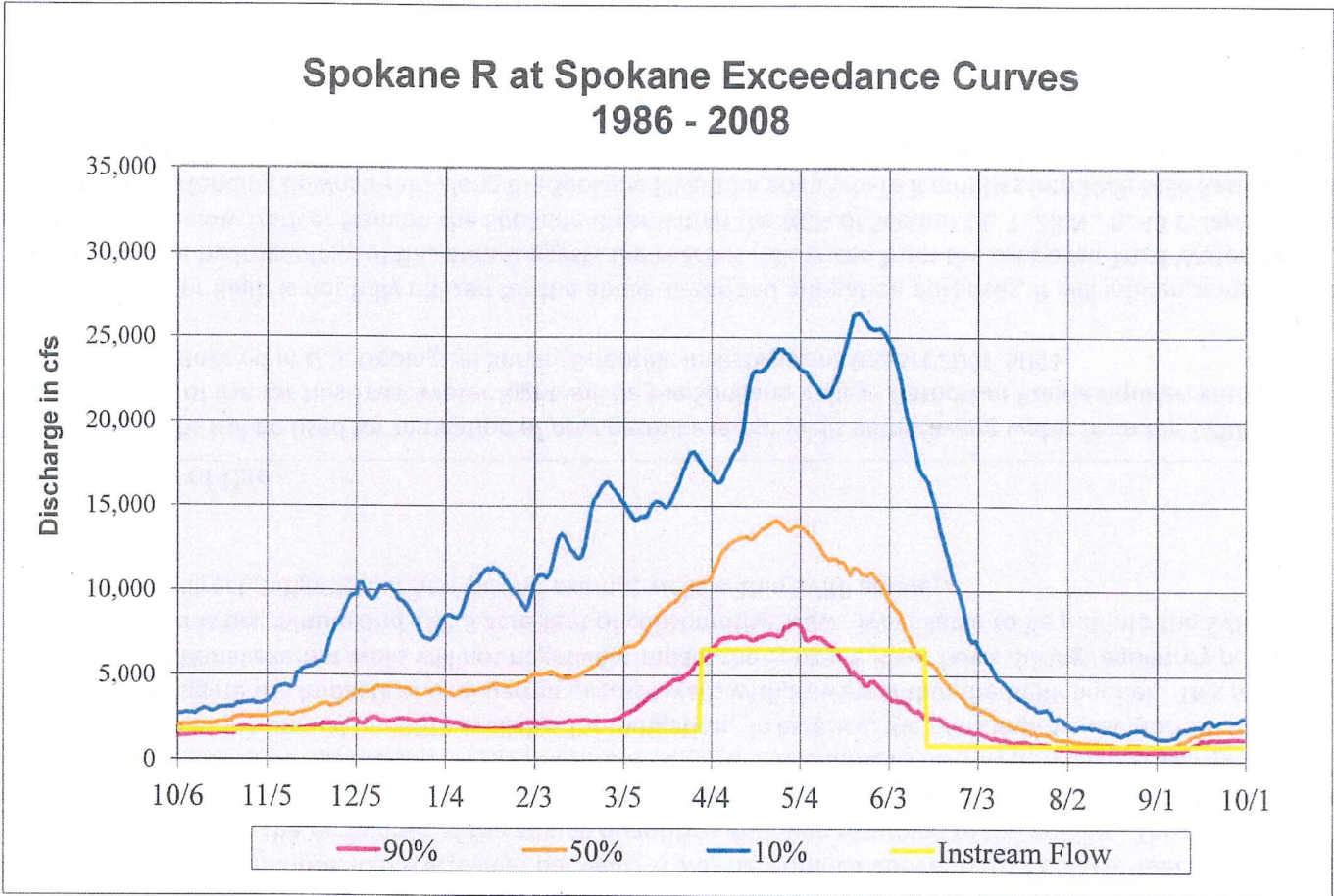
Therefore, there is a total of 1625 gallons per minute and 122.5 acre-feet of consumptive water available to be put into trust for the SVRP Aquifer Bank.

Proposed Use

This water right is proposed to be put into a bank to provide mitigation water for new permit exempt well water uses, within the SVRP Aquifer. This bank will be managed by Ecology and called the “SVRP Aquifer Bank”. The vast majority of land within the SVRP Aquifer is served by existing water purveyors, leaving very little land that will need a permit exempt well for development. This remaining land is for the most part only suitable to be developed into rural lots for single homes.

The SVRP aquifer is not closed to new appropriations of ground water. However, any new use will be regulated against the instream flow designated under WAC 173-577. This means that mitigation will be required for that portion of a permit exempt use that occurs when the Spokane River falls below minimum instream flows. The instream flow is typically met for most of the year about 90% of the time. This drops to about 50% during the summer, low flow months. From the exceedance data, we anticipate that flows in the Spokane River will drop below the instream flow at least seasonally, every other year. Water flows in the Spokane River can fluctuate significantly from year to year, meaning mitigation can be required for days to months depending on the year. In drought years, the river typically falls below the instream flows for

significant periods of time. April –October are the most likely months to not meet the instream flow, with August – October having the lowest overall flows. Spokane River low flow trends are indentified in the figure below.



A typical permit exempt well within eastern Washington is anticipated to withdraw approximately 400 gpd per person which equates to 1 acre-foot per year, per exemption. This estimate was derived from the calculation and information listed below: $(400 \text{ gpd} \times 2.43 \times 365 / 325851 = 1 \text{ acre-foot})$

- 300 gallons per day is a typical quantity of water estimated for domestic supply, of one person, when issuing a water right within eastern Washington.
- 100 gallons per day is estimated for typical, hobby-type, small industrial uses and/or stockwater
- 2.43 persons on average, per household, according to Census Bureau for Spokane County
- 365 days per year
- 325,851 gallons in 1 acre-foot

Ecology recognizes that this is a regional estimate and that some exempt well users will utilize more, some users will utilize less than 1 acre-foot per year. The USGS 3-D Modflow model for the SVRP Aquifer utilized a per capita water use for the SVRP area at 210 gpdpc. This would equate to slightly over one-half an acre-foot per exemption for the average 2.43 people per household. This quantity developed for the model, is an average primarily derived from regional purveyor water uses data. This number included domestic water uses varying from apartments to larger homes on acreage. This number is not necessarily representative of typical water uses permit exempt well, since it averages all levels of use. Therefore, the estimate of 1 acre-foot is anticipated to be more representative of actual use on a rural lot.

Mitigation within this bank is intended to be in perpetuity, which means that it will need to cover anticipated future water use conditions and realities. Currently, there are a number of purveyors within the SVRP Aquifer with large quantities of inchoate water rights, in good standing. When developed, these rights will have a significant impact on flows in the Spokane River. In 2001, one of the worst drought years on record, the Spokane River was below the minimum instream flow for 128 days or 35% of the time (if the Rule had been in effect at that time). This means that at full development of all municipal rights (including inchoate rights) in a drought year, mitigation for a permit exempt well may be needed for much of the year. Each new permit exempt well will be constructed at a variety of distances from the Spokane River. These varying distances mean that the timing of each wells' impact to the river will be different. Taking into account the above variables, it is anticipated that the mitigation will potentially need to cover the entire years' use of each permit exempt well in a drought year. Establishing the SVRP Mitigation Bank with a 1 acre-foot per year per exempt well quantity is anticipated to be sufficient mitigation and protective of the resource within the SVRP Aquifer.

The SVRP Mitigation Bank is intended to provide mitigation for typical permit exempt uses, but not necessarily the maximum that can be withdrawn. This means that unusually large water uses (over 1 acre-foot per year), such as unlimited stockwatering, and unusually large industrial uses will not be covered by this bank. New permit exempt uses over 1 acre-foot per year are allowed by statute (RCW 90.44.050), but will be subject to an impairment analysis, just like any other new appropriation of water. Water will sometimes be available under these large exempt use, but will be subject to the instream flow designated under WAC 173-557. Therefore, the portions of the exemption used above 1 acre-foot per year will be interruptible during low flow periods. The exempt well user will need to obtain mitigation or a water right if an interruption of water availability for large exempt water uses is unacceptable.

The proportionate instantaneous quantity available for each Certificate of Mitigation is approximately 13 gallons per minute. A typical allotment for a permit exempt use is 10 gallons per minute. Small well systems typically cycle on and off, meaning only a limited number of wells will actively withdraw water at any given time. Given this pattern of use no limit

will be placed on the actual gallons per minute that any single exempt well may withdraw at given time. However, water use can only be withdrawn at a rate that is considered a beneficial use of water as defined in statute. In addition, water use cannot exceed the limits of the exemption under this bank. It is estimated that 13 gallons per minute, per exemption, will provide adequate mitigation.

Other Rights Appurtenant to the Place of Use

A review of Ecology records were conducted for existing water right certificates, permits, and claims appurtenant to the project. The search focused primarily on Section 13, T. 25 N., R. 43 E.W.M. The review of Ecology records shows four water right certificates appurtenant to the authorized place of use, which are as follows:

Water Right Nos. 1269-A, 1270-A, 3255-A and G3-00854C are municipal supply water rights for Spokane County Water District No. 3. This municipal supplier provided water to the gravel mine from 2009-2011 and maintains an emergency intertie.

The proposed place of use in this mitigation bank is the SVRP Aquifer which provides water for the majority of uses within the general Spokane area. This includes being the primary source of water for hundreds of water rights and exempt wells.

The validity and extent of above listed water rights are not determined in this report.

Hydrologic/Hydrogeologic Evaluation

The following hydrogeologic analysis was written by John Covert, Hydrogeologist, of the Water Resources Program Technical Unit in Ecology’s Eastern Regional office.

This certificate authorized two wells located within the SE¼SE¼ of Section 13, T. 25 N., R. 43 E.W.M. Well No. 1 was removed in 2009 during the expansion of the gravel pit. This well was known as the “gravel washing well”. It was drilled as a 12” well in 1984 to a depth of 125’. It was completed in unconsolidated sands and gravels of the SVRP Aquifer. Well No. 2, known as the “batch plant well”, remained a primary source for this right until the gravel pit was shut down in 2011. It was drilled as an 8” well in 1984 to a depth of 125’. It was completed in unconsolidated sands and gravels of the SVRP Aquifer. This well has been abandoned as it currently consists of a welded cap with no pump installed. It will need to be decommissioned in accordance with WAC 173-160, provided the well is not intended for future use. Both of these wells are completed within the SVRP Aquifer, the same body of public water that the exempt wells enrolled in this Mitigation Bank will use.

The SVRP Aquifer is one of the most prolific and productive aquifers on the planet. It is difficult to conduct an aquifer test and measure drawdown in a nearby observation well because the aquifer’s hydraulic characteristics are so favorable that cones of depression are extremely shallow. The aquifer’s high permeability eliminates the risk of impairment to any nearby, existing wells from pumping. Construction of new permit exempt wells within the Aquifer (which will be considered for inclusion and participation in the Mitigation Bank) will not cause impairment to any nearby, existing wells.

Trust Water Right Calculations

As noted above in the tentative determination Ground Water Certificate No. G3-25690C was historically used to its full extent of 1625 gallons per minute, 429.6 acre-feet per year. It was determined above that 122.5 acre-feet out of the total use was consumptive, with the remainder of the annual quantity withdrawn returning to the aquifer. The proposed purpose of this right is somewhat uncommon with respect to Trust water, in that it would be used for a mitigation bank, rather than the more common application for instream flow benefit. The emphasis for this proposed Trust right is on the consumptive portion of the annual quantity available for mitigation. In essence, the consumptive use portion of the right would be used to mitigate the impacts of new permit exempt wells withdrawals within the SVRP aquifer. This mitigation will ensure that additional exempt wells will not negatively impact the Spokane River flows during regulatory periods. Therefore, 1625 gallons per minute and 122.5 acre-feet of consumptive water is available to be put into the SVRP Aquifer Bank specifically for direct mitigation of new permit exempt wells within SVRP aquifer.

Trust Water Place of Use

This Trust Water Right will be used for mitigation of new permit exempt wells withdrawing water from the SVRP aquifer. The functional place of use for this Trust Water Right will be the Spokane Valley - Rathdrum Prairie Aquifer, within the State of Washington, as identified in U.S. Geological Survey Scientific Investigations Report 2007-5041.

When this Trust Water Right is not fully utilized for the above-described mitigation purposes, it will influence instream flows within the basin. The hydrogeology of this area suggests the reaches influenced from the proposed Trust Water Right would be from just below Upriver Dam on the Spokane River within the NE¼ of Section 11, T. 25 N., R. 43 E. (approximately River Mile 80) and extending downstream along the Spokane River to a point where it empties into Nine Mile Reservoir within Section 28, T. 26 N. R. 42 E.W.M. (approximately River Mile 64). This marks the downstream limit of the Spokane River and the beginning of the pool from Nine Mine Reservoir.

Trust Water Management

Trust water under this right will be used specifically to form a bank for mitigation of new permit exempt uses from wells within SVRP Aquifer. This trust bank is consistent with RCW 90.42.080, the “Spokane River and Spokane Valley Prairie

(SVRP) Aquifer Water Resources Management Program” Chapter 173-557 WAC and amendment to the “Little Spokane River Basin Water Resources Management Program WAC 173-555-010”. The purpose of this Trust Water Right is to offset the impacts of new permit exempt uses from wells withdrawing water out of the SVRP aquifer.

This new water bank, referred to as the SVRP Aquifer Bank, will be created and operated by Ecology. It will be used to keep track of new permit exempt well mitigation within the SVRP Aquifer. When someone proposes to develop a permit exempt well, they must check with Ecology, before beginning a project. At that point it will be determined if their project needs mitigation water and availability of water from the bank will be evaluated. Once the exempt well has been constructed and put to use, the applicant will need to request a “Certificate of Mitigation” from Ecology. This certificate will be recorded with the county on the specific parcel(s) of land that the project is located. The following is a list of requirements and restrictions for the SVRP Aquifer Bank:

When Mitigation is Required

- A Certificate of Mitigation will be required when a new or existing permit exempt well is put to use for the first time after February 27, 2015, the effective date of the rule.
- Mitigation can only be used for a well that withdraws water from the SVRP aquifer, within the State of Washington. It is generally for new permit exempt uses which typically consist of homes outside of any purveyor’s service area. In specific circumstances, mitigation water is available for a well within a purveyor’s service area when water cannot be provided in reasonable and timely manner.
- Only one Certificate of Mitigation can be issued per project. Projects requiring more water than allowed under the bank must obtain a water right or water from a purveyor.

“Certificate of Mitigation” Quantities

- Each Certificate of Mitigation is restricted to the following quantities:
 - Single domestic or group domestic supply not to exceed 5,000 gallons per day (gpd)
 - Non-commercial irrigation of ½ acre of lawn and garden
 - Mitigation will not cover unlimited stockwater but is restricted to a maximum of 5,000 gpd
 - Small industrial uses not to exceed 5,000 gpd
- Other restrictions for a Certificate of Mitigation related to quantities:
 - If used for group domestic supply, the entire project will be limited to the quantities listed above.
 - Each project is restricted to one exemption (Certificate of Mitigation) and will be limited to the quantities listed above, no matter the number of wells physically constructed for the project.
 - SVRP Aquifer Bank water cannot be used to cover new water right requests that require a permit or requests for stockwater above 5000 gpd.

General Requirements and Restrictions

- Mitigation water cannot be consolidated into existing municipal water rights. This water is held in trust by the State of Washington for exclusive use of the SVRP Aquifer Bank.
- Mitigation water will revert back to the state if at any time the exempt uses are provided water from another source or the project is abandoned.
- No flow meter or measuring device is currently required. Although unlikely, in the future Ecology may require an approved measuring device be installed and maintained for each of the sources authorized by this Certificate of Mitigation in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173. This is the same general requirement that can be currently applied to an exempt use anywhere within the state.
- No fee is currently required for mitigation water from the SVRP Aquifer Bank. However, the Certificate of Mitigation must be recorded with the County Auditor’s Office, which requires a fee set by statute. (Currently, \$72 plus \$1 per additional page)
- If an applicant constructs a well within the SVRP aquifer boundary and for whatever reason does not withdraw water from the aquifer, no mitigation is required. This will be determined by Ecology when they review the required well log prior to issuance of a Certificate of Mitigation.
- Wells constructed within the SVRP Aquifer boundary that do not withdraw water from SVRP aquifer as defined within the rule are exempt for this process and cannot receive a Certificate of Mitigation.
- Mitigation cannot be used for the development of a subdivision that requires more water than the permit exemption will allow. This type of development requires a water right or they must obtain water from a purveyor.
- If any portion of the parcel of land proposed for a permit exempt well is located within the mapped boundary of the SVRP Aquifer as depicted in the Instream Flow Rule, WAC 173-557, then they are subject to the rule. This means they are required to go through the mitigation process outlined above. If their well is not completed within the SVRP Aquifer, they won’t be required to participate in the mitigation program. This will be determined by Ecology when they review the required well log because a portion of their parcel is located above the SVRP Aquifer.

This application represents the first water right proposed to be placed into Trust for the purpose of mitigation of new permit exempt wells within the SVRP Aquifer Bank. As stated above, 1625 gpm and 122.5 acre-feet of consumptive water is available under this water right. This means at a rate of 1 acre-foot per Certificate of Mitigation, there are 122 exemptions available. This quantity of mitigated exemptions is estimated to be sufficient to cover new exempt uses within the SVRP Aquifer for many years. Currently, there are few undeveloped lots within the SVRP Aquifer that are not located within the service area of a purveyor. The vast majority of the developable lots can be served water in a reasonable and timely manner, by a purveyor. Therefore, the SVRP Aquifer Bank will only be used to provide water to those lots that are outside of the service area of a purveyor or that cannot be served water from a purveyor in a reasonable and timely manner.

As part of continuing management of the SVRP Aquifer Bank, Ecology will notify interested parties and provide informational documents about the bank, as needed. In addition, Ecology will attempt to obtain additional water for the

bank if it ever runs out of mitigation water. In the event the bank runs out of water and Ecology cannot obtain a new right, it will be the responsibility of the individual land owner to obtain mitigation for their permit exempt well.

Impairment Considerations

“Impair” or “impairment” means to 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, not including earlier filed applications (HB 1832); and/or 2) to prevent the beneficial use of the water to which one is entitled; and/or 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flow levels established by rule (POL-1200); and/or 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150). Demonstration of impairment would require evidence of a substantial and lasting or frequent impact reflecting such conditions.

The proposed trust water use of providing mitigation for permit exempt wells has been evaluated for potential impairment to existing water rights in the area. As noted in the Hydrogeologic Evaluation, no impairment is anticipated by use of this water from mitigation bank. The reason for this mitigation bank is to protect the Spokane River flow. Putting this right into a bank to provide mitigation for exempt wells is not anticipated to impair the Spokane River. To date, there is no record of any regulation between ground water rights based on priority within the SVRP Aquifer. The purpose of this proposed change is to prevent impairment of existing rights through withdrawal of water from new permit exempt wells. No impairment to existing rights is anticipated as a result of approval of this proposed trust water application.

Public Interest Considerations

This Trust Water Right will be used to mitigate new permit exempt water uses within the SVRP aquifer boundaries as described in “Spokane River and Spokane Valley Prairie (SVRP) Aquifer Water Resources Management Program (Spokane River WRMP) Chapter 173-557 WAC and the amendment to “Little Spokane River Basin Water Resources Management Program WAC 173-555-010”). This Trust Water Right will ensure that adequate water is available for the developable lands within the SVRP Aquifer boundary that do not have access to purveyor water or cannot receive water from a purveyor in a reasonable and timely manner.

There has been no public expression of protest or concern regarding this specific proposal, and no findings through this investigation indicate that there would be any detrimental impact to the public welfare through issuance of the proposed change of use of this existing water right.

Conclusions

It is the conclusion of this examiner that, in accordance with Chapter 90.42 RCW, 90.44 RCW and RCW 90.03.380 RCW, this application for a trust water right under Ground Water Certificate No. G3-25690C will not impair existing water rights, is a beneficial use of water, will not enlarge the right originally conveyed by the certificate, and is not detrimental to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change in purpose of use be approved in the amounts and within the limitations listed below and subject to the provisions listed in the Report of Examination.

Trust Water Right Attributes

- 1625 gallons per minute
- 122.5 acre-feet per year (consumptive)
- Trust water bank for mitigation of permit exempt wells

The functional place of use for this Trust Water Right will be the Spokane Valley - Rathdrum Prairie Aquifer, within the State of Washington, as identified in U.S. Geological Survey Scientific Investigations Report 2007-5041.

The stream reaches that will potentially be affected by this Trust Water Right begins below Upriver Dam on the Spokane River within the NE¼ of Section 11, T. 25 N., R. 43 E. (approximately River Mile 80) and extending downstream along the Spokane River to a point where it empties into Nine Mile Reservoir within Section 28, T. 26 N. R. 42 E.W.M. (approximately River Mile 64).

Dan Tolleson, Report Writer

Date

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